

## **ATYPICAL SYMBOLIC PLAY DEVELOPMENT: A PREDICTOR OF AUTISM IN CHILDREN**

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### **ABSTRACT**

Symbolic play is an important predictor of cognitive and language development in the second year of life. Symbolic play is uniquely affected in children with autism. The children with autism significantly exhibit decreased frequency, complexity and novelty of spontaneous symbolic play behavior. Various hypothetical approaches in view of executive functioning, social learning interpretation and general cognitive maturity, have been suggested for unusual symbolic behavior in children with autism. An inter subjective development in symbolic play also suggests the participation of meat, that are the presentations and the attributes of joint attention in symbolic play in this special population. However, further research is required to investigate these constructs, due to the broad spectrum of play behavior in children with autism. Symbolic play is a significant diagnostic tool of diagnosis of autism in children, as its development is reported to be affected in the majority of children with autism. Despite of various causal factors, motivational training in symbolic play behavior has shown significant results, in promoting desirable behavior in children with autism.

Play is an important component in every child's life. A child starts his playful activities very early in infancy stage, before the development of language. Children's symbolic play represents paralinguistic skills that form a basis and support for subsequent language development. Along with prediction of language development, it signals the development of representational thoughts, which greatly increases the flexibility of the child's mental processes. During the 2nd year of life, children's play normatively moves from being explored, and object oriented to being symbolic, and pretense oriented. During the fifth or sixth sensor motor period, children's initial interactions with objects are exploratory in nature, and their schemas characterize objects (e.g., A ball), as something simply, to be physically manipulated (Piaget, 1962). However, as children begin to engage in symbolic play, they use familiar objects in new ways, for example, by pretending that a ball is an orange that they are eating.

Autism is a disorder that affects development of reciprocal social relations, communicative ability and appropriate use of objects, beginning in the first three years of life. The symbolic play of children, with Autistic Spectrum disorder has been described as simple, repetitive and stereotypical. It also has been found that, children with Autism spend less time playing functionally, than typical children. The way they play also shows less variation and repetitive use of objects. It also lacks much of the complexity and diversity that characterize the play of typical children. According to Lord et al (2000), symbolic play deficits are so widely, recognized in autism that a failure to use toys, symbolically is an item on many diagnostic systems for Autism. Many researchers have reported a relationship between language and symbolic play, in children with autism. The results of empirical studies have shown that, while only receptive language was related to play ability in normal and cognitively impaired children, both receptive and expressive language were related to the play of children, with autism.

**KEYWORDS:** Children, Symbolic Play Behavior, Hypothetical Approaches

## INTRODUCTION

### Theoretical Accounts of Symbolic Play in Children with Autism

The children with autism show deviance in their symbolic play behavior. These types of deficits have been investigated, through different competing theories, concerning the causes of the symbolic play deficit in autism.

### Inter Subjective Development in Symbolic Play

While the initial interpretation of pretend play in autism, was focused on the difficulty of generalization of symbols in symbolic play, Leslie (1987) suggested that, symbolic play required the same type of cognitive meta-representational capacity that, understanding other minds require. In other words, "Theory of mind" is thought to involve the capacity to understand another's mental state and predict behavior, based on appreciation of these mental states. According to Tomasello & Rakoczy, (2003), this intersubjective understanding begins to develop in the latter half of the first year, as seen in the use of social referencing, joint attention behavior and intentional communication to coordinate attention with another and share experiences.

Both theories of mind capacity and symbolic play are specifically impaired in children with autism, and Leslie has suggested that, both of these skills are required to represent another's representation, a capacity called "Meta-representation". Leslie described the meta-representational challenges as follows: in pretend play, the child needs to simultaneously hold the representation in mind, and the newly assigned pretend identity (Meta-representation), in order to produce or understand others symbolic play.

While this view of symbolic play is not universally accepted among cognitive psychologists, according to Charman et al (2003), the theoretical links among symbolic play, theory of mind and joint attention behavior have some empirical support in normal development. This is further strengthened by the repeated findings of autism specific deficit, in all three areas (Volker et al 2004). According to Volker's study, the children with autism have been found to be impaired in the production, and comprehension of joint attention gestures.

### Executive Function

A series of studies have challenged the view that children with autism are specifically impaired in the ability to create symbolic play representation (Lewis et al 2003). These and other similar studies have revealed that, children with autism can produce symbolically transformed scenes and props, when an adult scaffolds the situation. Jarrold and colleagues (1996) suggested that, this was better understood as a problem of generating ideas than a difficulty with understanding representation. Generalization is one of the executive functions, which include the ability to plan ahead in a sequence of actions, the formulation and initiation of goal directed behavior. The other important executive factors in symbolic play include inhibitory control, working memory and the ability to generate novel behavior. Children with autism show deficits on a variety of these executive function tasks. A series of studies have supported this view of deficit in executive function, on the basis of a typical symbolic play behavior in children with autism. For example Pennington et al (1997) suggested that, production of fewer symbolic acts can be explained, as a result of the difficulty that individuals with autism have in generating new schemes, which is a characteristic to executive functioning. Moreover, the predominance of repetitive over

novel symbolic behavior may arise as a secondary consequence of the primary deficit, in generating alternative behavior.

### **Decontextualization and Decentration in Symbolic Play**

Early form of symbolic play occurs, when the infants take functional acts, such as putting a spoon to the mouth or talking on the telephone and reproduces them in to the play. These are decontextualize behaviors, behavior detached from the situational context, in which they originally occurred and goals they usually accomplish. Research of Vondra & Belsky, (1991), investigating the play behavior of infants suggests that, almost all the symbolic acts produced by children with autism, are those which occur at the earliest stage of this decontextualization processes, such as bringing a bottle, cup or spoon to mouth, may indicate a difficulty in elaborating on their initial ability to associate a particular toy.

### **Cognitive Maturity**

It is one of the possibilities that symbolic play develops in an individual as that individual matures cognitively. This view is widely encouraged and developmentalists tend to think of play as developing through cognitive maturation. Nonverbal cognitive ability may influence symbolic play development. Normally developing infants, before they achieve a certain level of cognitive functioning, do not engage in activities that could be considered as play; as they mature cognitively, children progress. Since, changes in both play and cognitive development co-occur, limitation in one domain can affect the development of other process. Baron-Cohen (1987) found that, children with autism who pretended during play had significantly higher nonverbal mental ages, than those who did not. Moreover, children with autism who have comorbid mental retardation may be even less able to learn from their surroundings, possibly putting them below the threshold for learning. Thus, many studies support the fact that, a deficit in nonverbal cognitive abilities may account for some of the play impairment, seen in children with autism spectrum disorder.

### **Social Learning Interpretation of Symbolic Play**

There is one further explanatory theory, which is based on the lack of social learning and dyadic engagement that, children with autism experience on a wide range. While developmentalists tend to think play as developing through cognitive maturation, several authors have emphasized the importance of imitative, or observational learning in the development of symbolic play.

Lord (2000), in his study reported that, the lower diversity and elaboration of symbolic play in autism might arise as a consequence of their difficulties, in relating to other people. Parents and caregiver play a crucial role in introducing their child, to the shared meaning of things. They highlight the salient features of objects, explicitly demonstrate their functional use, and physically structure their child's action, with an object. It is likely that, such processes of social mediation would be seriously disrupted in the case of young children with autism who show specific deficits in language, imitation and joint attention.

Problems in using other people as a source of guidance for how to use particular objects may account for the reduced diversity of the symbolic play produced by the children with autism. Without inspiration from other people these children are left with their own, more limited, ideas of interesting actions on objects.

Another position is also possible, that executive dysfunctions and impoverished social interaction both impact adversely on play in autism. Children with autism may be thrown back on their own ideas, of interesting actions as a result

of learning about objects from other people.

### **Attachment in Symbolic Play**

Children with autism show deviances in their play behavior that may be associated with delays in their social development. When the developmental level of child is taken into account, the attachment relationship of the child with the caregiver at this young age is another predictor of the level of play behavior, than the child's disorder. The social part in play development, starts with the step from the child's playing by himself or herself, to noticing the play of others. Moreover, the quality of the relationship with parent or caregiver may have an impact on motivational aspects of play behavior. A secure relationship with a trusted attachment figure, optimizes the opportunities for the child to explore the environment. A study by Naber et al (2008), used "Strange situation procedure" to observe attachment behavior of the children of age group between 36 -42 months, with autism with their mothers. The scores in the procedure were based on proximal seeking, contact maintaining, resistance and avoidance to play materials. The findings from this study highlight the importance of attachment, in the development of play of children with autism. The quality of the parent child relationship appears to contribute substantially to the development of symbolic play in young children with autism. The children with secure attachment relationship spent more time playing. As it is evident that, autistic children show difficulty in eye contact, it may manifest into less parental involvement.

The ways in which specific theoretical constructs have been used, to explain and to investigate symbolic play behavior in children with autism, that needs to be explored further. It appears that, the development of symbolic play in children with autism is not tied uniquely, to one area of development but is rather linked to number of other areas of functioning. It is therefore, very important that, future studies consider several domains, simultaneously.

### **Symbolic Play as a Predictor for Autism**

The diagnostic criteria for autism relating to social and communicative development require time to emerge and may therefore, are difficult to assess in preschool children. According to Gould (1986), the differentiation of children with autism with a mental age of less than 18 months from non-verbal children, with developmental delay without autism or from those with language impairment is difficult, and may result in misdiagnosis or a decision to wait. Stereotyped and repetitive routines, behavior in symbolic play contribute to the important factors in diagnosis. The findings of some empirical studies also provide additional support, for the inclusion of symbolic play measures, as diagnostic tools for autistic children. The studies suggest that, symbolic play can be used as an informative portion of the diagnostic process. Symbolic play measures are also appropriate for children with autism, as they are generally nonthreatening, require little or no expressive or receptive language, and are short and simple to administer. They can also provide good clinical information to the assessor, especially for a child who is untestable on more conventional standardized measures. One perspective study by Lord (1995), compared eighteen month old children at genetic risk for autism, with fifty randomly selected children. Children were assessed using the checklist for autism in toddlers (CHAT), and then reassessed at thirty month of age. It was found that, the predictors of diagnosis of autism at thirty month of age were the presence of two, or more of the following behaviors at eighteen months and it included lack of pretend play, joint attention and limited use of symbolic gestures during play.

### Teaching Symbolic Play Skills to Children with Autism

“Children with autism tend to show an absence of spontaneous symbolic play, regardless of their mental age, indicating some type of play deficit that goes beyond mental retardation in general” ( Baron- Cohen, 1987 p 74). Many researchers have found that, children with autism perform more symbolic play actions after modeling than they do in spontaneous situations. Lewis and Boucher (1988), however, found that when verbally elicited or instructed to play symbolically; children with autism perform at levels similar to that of typical children of the same language ability. This research suggests that, children with autism may learn to perform symbolic play action if taught in the environment, that includes modeling or prompting.

Koegel, O’Dell, and Koegel (1987), have developed a method for increasing motivation and consequently learning, in children with autism. The program called Pivotal response training (PRT) works, to increase motivation while teaching important skills, typically language acquisition. Important aspects of training include turn taking, reinforcing attempts at appropriate responding, frequent task variation, allowing child’s choice of activities, interspersing maintenance tasks, and using natural consequences. Stahmer (1995) assessed the feasibility of teaching symbolic play skills to children with autism, through Pivotal response training. The result of this investigation indicate that children with autism can learn to engage in symbolic play at levels similar to that typical children.

Pivotal response training has proven a useful tool for teaching the complex social skills of symbolic play. This type of training may provide children with autism of appropriate language ability, somewhat predictable context for learning complex skills that generalize to new contexts. The training is flexible and facilitates teaching symbolic play skills to children with autism in generalizing the play behavior.

Engagement in symbolic play is one of the areas of development most profoundly affected by autism and a large number of studies of symbolic play in autism revealed with the consistent findings that children with autism show decreased frequency, complexity and novelty of spontaneous play behavior. Symbolic play deficits are so widely recognized in autism that a failure to use toys symbolically is an item on many diagnostic systems for autism. Different theoretical constructs have been proposed to explain these unique features of symbolic play in children with autism. However, these domains need more substantial research to account for the problems with symbolic play in these children.

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